Illinois
Environmental
Protection Agency

Office of Public Information
2200 Churchill Road
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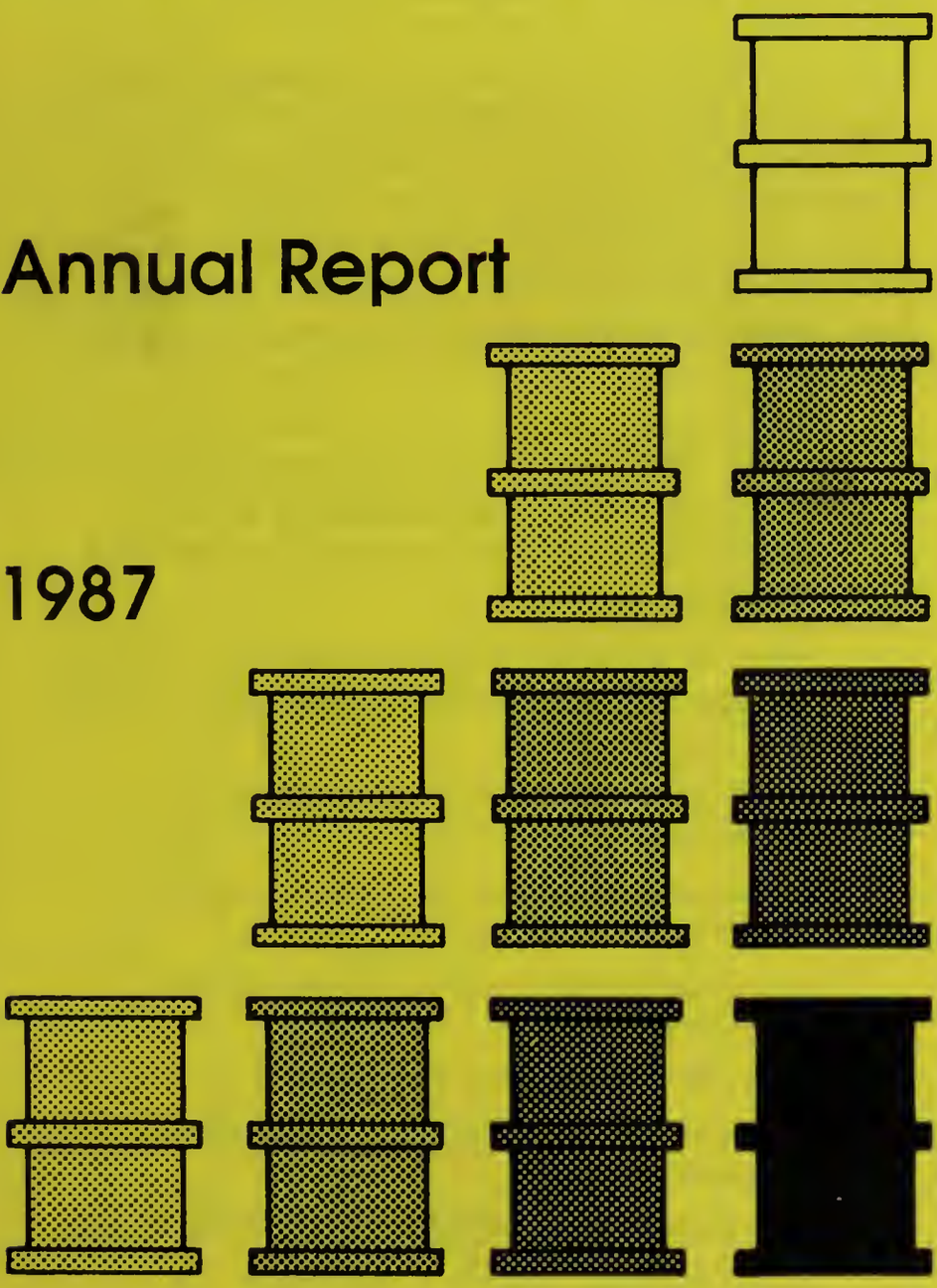
Emergency Response Unit

Annual Report

1987



The Illinois Environmental Protection Agency's Emergency Response Unit (ERU) coordinates the Agency's response to environmental emergencies involving chemicals and ensures that any harmful contamination is cleaned up. Since the Unit began operations in 1978, more than 11,000 emergencies have been reported. Currently, the ERU receives about 125 reports each month.

The ERU works within the state response system in which the Illinois Emergency Services and Disaster Agency serves as the central contact for response to any emergency or disaster requiring state notification or involvement. An emergency involving the environment should be reported to IESDA by calling 1-800/782-7860, a 24-hour hotline. The ERU operates from the IEPA's headquarters during normal working hours and is supplemented by an on-call duty officer to cover those times after normal work hours and on weekends.

For all environmental emergencies for which the IEPA has responsibility, the ERU coordinates the Agency's response. These responsibilities include:

* spills, fires and explosions involving hazardous or toxic materials at fixed facilities and for transportation related incidents,
* oil and chemical spills on water or land,
* sudden releases of toxic substances into the atmosphere,
* emergencies involving public water supplies,
* emergencies involving waste water treatment systems,
* emergencies involving solid waste disposal sites,
* fish kills caused by pollution,
* disposal or treatment of hazardous materials, and
* abandoned hazardous waste incidents posing an immediate hazard.

The ERU collects information about environmental emergencies and responds directly or notifies other divisions within the IEPA of any needed action. The ERU's principal function is to supply technical expertise to first responders and other emergency personnel such as firemen and police officers. Information for first responders typically includes the physical and toxic characteristics of the materials involved, appropriate response and treatment actions, and precautions to be taken to prevent further injury and damage to public health and the environment.

1987 SPILLS

The ERU received 1,676 chemical emergency incident and environmental complaints in 1987. This represents an 11 percent increase over the number of incidents reported in 1986.

Over the last nine years there has been a 10 percent average annual increase in the number of incidents reported. The increase is attributed to both more spills and better reporting of spills.

ANNUAL INCIDENTS

1978 435
1979 788
1980 885
1981 980
1982 909
1983 1094
1984 1374
1985 1366
1986 1504
1987 1156*

**520 complaints were not included in the 1987 total. Complaints were included in the incident totals for previous years.*

Reports of environmental emergencies are more frequent during March, April and May. Two main factors contribute to this increase in incidents. Those months are ones of high agricultural activity when a greater potential for accidents and spillage exists. In addition, groundwater levels are at their highest, and evidence of previously undetected spillage from buried pipes and tanks is more apparent.

1987 INCIDENTS

Jan	76
Feb	93
Mar	94
Apr	118
May	104
Jun	110
Jul	97
Aug	99
Sep	99
Oct	94
Nov	76
Dec	96

TYPES OF SPILLS

Spills involving petroleum products constituted 49 percent of the materials involved in the 1987 incidents. A majority of spills reported in the southeastern part of the state, which is an oil production area, involved crude oil.

Only 3 percent of the reported incidents in 1987 involved pesticides. However, spills involving pesticides are of special concern because of the extremely toxic nature of pesticides. Most pesticide incidents occur as a result of farm accidents.

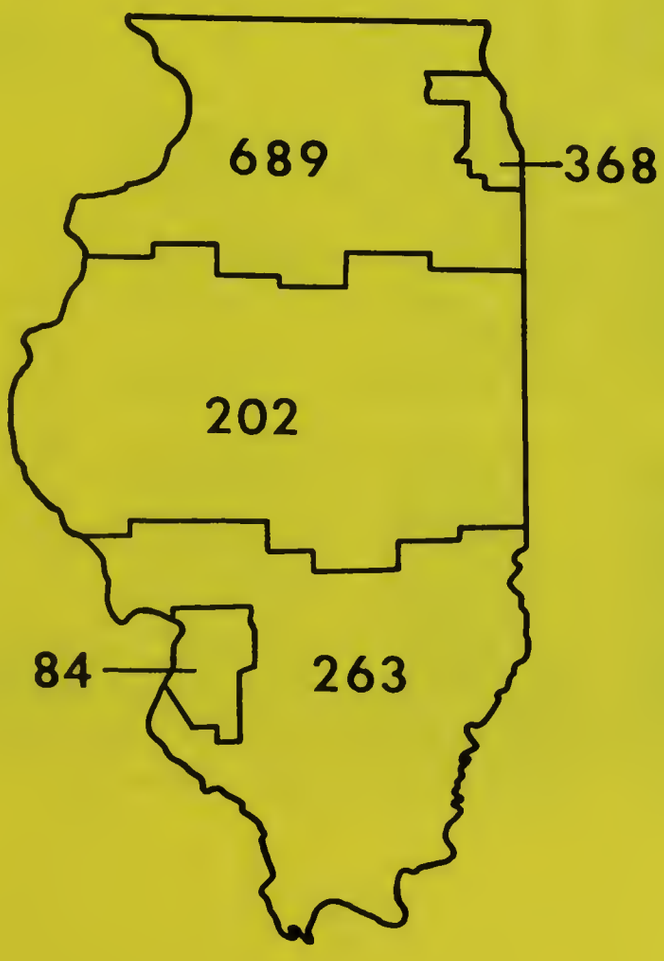
Polychlorinated Biphenyls (PCBs) were involved in 4 percent of the reported incidents. PCBs are often found in older utility capacitors and transformers. These spills often occur when capacitors overheat on power poles.

TYPE OF SPILLS

PCBs	54
Farm Chemicals	93
Petroleum Products	635
Paints and Solvents	125
Corrosives	173
Flammables	405
Other	356

SPILLS BY DISTRICT

The distribution of incidents throughout the state is related to commercial and industrial activity and the state's major highways and railyards. Because of the large number of incidents reported in the Metropolitan Chicago and Metro-East areas the ERU has stationed full-time response personnel in these areas. In addition, a manager, chemist and incident co-ordinator are based at the IEPA headquarters in Springfield.



HAZARDOUS SUBSTANCES

The ERU supervised the cleanup, removal and disposal of abandoned hazardous substances for 23 incidents in 1987. Investigation of the criminal aspects of these incidents was coordinated with the Illinois State Police-Division of Criminal Investigation and the multi-agency CHEMHIT team.

Approximately $375,000 from the Hazardous Waste Fund was used to finance these emergency cleanups. The Agency has initiated legal action against the responsible parties, when known, to recover cleanup costs.

CASE HISTORIES

Homer Residence

Large amounts of hazardous and toxic materials including explosives, flammable liquids, narcotics, corrosives and poisons were discovered at a physician's private residence in Homer. The accumulation of the material over many years led to extreme danger for the doctor and his neighbors. The 1,500 pounds of hazardous substances were discovered and reported to the IEPA by the legal guardians of the elderly doctor.

Because of the immediate danger to the community, money from the Illinois Hazardous Waste Fund was used to finance the $71,000 cleanup. The complexity and scope of the project required that the cleanup be handled in two phases. The first phase was to inventory and segregate the chemicals inside the home. This was difficult because the hazardous materials were distributed about the house in a very sloppy manner. It was difficult to walk through the home as the chemicals were scattered throughout each room and there was often no more than a narrow path with chemicals piled up on both sides.

Using the inventory as a basis, the second phase consisted of actually removing and disposing of all the hazardous materials. The doctor had apparently attempted to manufacture high explosives, so that much of the waste

had to be tested for reactivity before it could be shipped to a disposal site.

Columbia Rustproof, Inc.

During a routine inspection on Oct. 29, 1987, the Chicago Fire Department discovered leaking drums and open tanks of hazardous material in the abandoned Columbia Rustproof plating facility. The Emergency Response Unit was contacted to provide on-scene assistance, to mitigate any public health threat and to begin working on proper clean up and disposal alternatives. Potentially responsible parties refused to initiate the necessary cleanup actions.

Immediately, actions were taken to inventory the materials, containerize cyanide spillage, move drums to the inside of the building and secure access to the building.

Over 40 drums containing cyanide contaminated waste, flammable liquids, caustic liquids and corrosive materials were found. Chemical spillage had occurred throughout the building and a standing acid vapor cloud was present.

The cleanup included the removal of the building's roof and sidewalls because they were so structurally unsafe that worker safety necessitated that action. All the hazardous chemicals and spillage were successfully removed and disposed of over five months. The cleanup project cost approximately $80,000 and cost recovery efforts are underway.

LEAKING UNDERGROUND STORAGE TANK PROGRAM

Approximately 120 new incidents of leaking underground storage tanks (LUST) were reported in 1987. A significant number of the LUST problems posed an immediate health and safety threat. These incidents involved many facets: odors, explosive vapor levels, tainted groundwater and soil contamination.

In 1987, the Underground Tank Unit was formed as part of the IEPA's Division of Land Pollution Control. The ERU remains responsible

for handling the emergency aspects of LUST incidents; however, the Underground Tank Unit now handles all the follow-up measures because a LUST cleanup can take several years to complete.

SPECIAL PROJECTS

During the summer of 1987, 27,000 pounds of toxic and hazardous chemicals were safely removed from high schools throughout Illinois as part of a program to remove dangerous materials which were no longer used in the classroom or laboratory.

The program was initiated because the IEPA had received requests from many high schools asking for assistance in getting rid of the surplus chemicals. Schools were surveyed to determine how many had laboratory chemicals which needed to be disposed of safely. Results indicated that over 60 percent of the schools surveyed wanted to get rid of hazardous material.

If handled individually, the safe disposal of surplus chemicals could have cost from $1,000 to $15,000 per school. Because costs of this magnitude deterred some schools from addressing the problem, many schools opted to leave chemicals on the shelf. Such accumulation and aging of chemicals constituted a health threat if a fire occurred or a shelving unit collapsed.

To reduce the potential for accidental releases, the IEPA initiated and managed a statewide collection program during the 1987 summer recess. Collection and disposal was conducted by qualified professionals under contract to the IEPA. The contractor picked up chemicals at schools which had more than 100 pounds of eligible chemicals. Most schools transported their surplus chemicals to central collection stations in each of the 57 Educational Service Regions in Illinois.

The program, which cost $350,000 to collect and dispose of 27,000 pounds of chemicals, was completed in August 1987.

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